

NASA SBIR/STTR Technologies

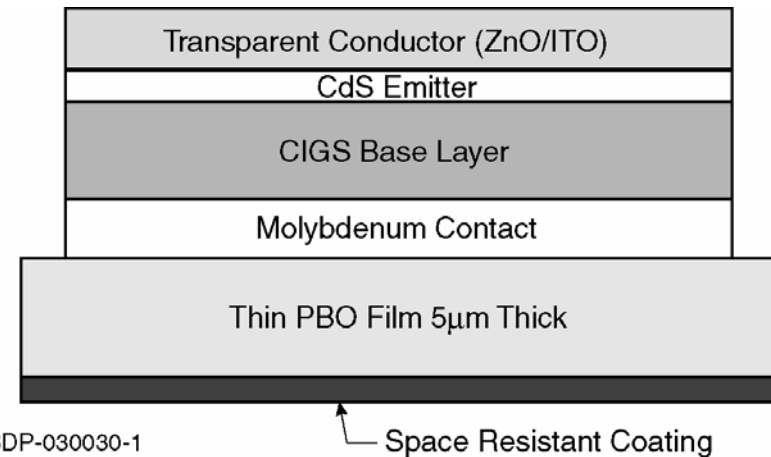


Radiation Resistant and Improved Emissivity Solar Cell System Using Modified PBO Film for Deep Space Application

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Identification and Significance of Innovation

The development of 20% AM0 thin-film solar cells exhibiting high power/weight ratios will be necessary for future space platforms to become a reality. In this proposed effort, Foster-Miller will focus on the task of developing a high-strength, high temperature resistant substrate, thus providing the means for achieving the desired power/weight ratio and AM0 efficiency.



Technical Objectives and Work Plan

Technical Objectives:

- Identify coating (s) that would render PBO resistant to atomic oxygen and UV irradiation
- Identify coating(s) to increase surface emissivity
- Produce PBO films of consistent gauge thickness
- Demonstrate modified PBO fit for CIGS deposition to produce PV arrays with high power density

NASA and Non-NASA Applications

NASA - solar power satellites, microsats, nanosats

Non-NASA - Low power applications requiring cells significantly smaller than those currently available

Contacts

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